

Amendments to the Specification:

Please replace the paragraph beginning at page 6, line 17, with the following amended paragraph:

31 The second heat exchanger 44 is intended to reheat the gas, and has an outlet connected to line 46 for the reheated gas. Like the first heat exchanger 22, the second heat exchanger 44 has an inlet 48 and an outlet 50 for a water heating stream. The inlet and outlet 48, 50 are part of a second temperature control circuit, also referred to as a reheating section, including a pump 52, a make up inlet 54, a fourth heat exchanger 55, and a second heater 56. Thus, like the arrangement of the first heat exchanger 22, the pump 52 circulates the make up water, and this stream can be either cooled with the fourth heat exchanger 55 or heated with the second heater 56 to a desired temperature.

Please replace the paragraph beginning at page 6, line 30, with the following amended paragraph:

32 The arrangement of Figure 1 is intended to provide controlled humidification of the gas stream supplied to the fuel cell stack 60, and to enable both the temperature and humidity to be precisely controlled. This is explained further, by the detailed description of the mode of operation of the apparatus of Figure 1. Thus, dry incoming process gas is supplied to the saturator 16, and gas is super-saturated with steam in the saturator 16, to a humidity level greater than that ultimately desired for the gas. Both the flow of the gas through line 12 and steam through line 14 are controlled and metered. The effect of injecting steam into the gas is also to heat the gas to a first pre-set temperature. Typically, on leaving the saturator 16, the gas is supersaturated at

B2 the first pre-set temperature of around 90°C, although the gas may be supersaturated at any temperature in the range of 10°C to 120°C.

Please replace the paragraph beginning at page 8, line 5, with the following amended paragraph:

B3 As mentioned above, changing demands on the fuel cell stack are accomplished by changing the flow rate for the gas passing through the line 12. If it is desired to change the temperature and/or the humidity of the gas flow then this is achieved by control of the operating conditions of the first and second heat exchangers 22, 244.

Please replace the paragraph beginning at page 8, line 33, with the following amended paragraph:

B4 Referring to Figure 7, there is shown a schematic view of a humidification circuit according to a second embodiment. Here, a steam inlet 70 is connected to a steam supply and is provided with a pressure sensor 72, connected to a pressure switch (not shown) for tripping the fuel cell system if the steam supply pressure is too low. The line 70 then passes through a main shut off valve 74 and a trap 76 is provided for draining off any condensation which may have formed. The steam line then passes through a pressure regulator 78 and includes a pressure gauge 88.

Please add the following new paragraph before paragraph beginning at page 9, line 6:

B5 A reference inlet, e.g. for air, is provided at 86. This inlet 86 is connected through a pressure regulator 84 and, a three way valve 80 (with a temperature controller 82) to the pressure regulator 78.

Please replace the paragraph beginning at page 9, line 13, with the following amended paragraph:

Thus, the line 90 includes a steam regulator or shut off valve 94 connected to a further regulating valve 96. Valve 96 is a metering valve which controls the flow of steam into the gas lines. The valve 96 is connected to a temperature controller 98 and a back pressure regulator 102.

34 Please replace the paragraph beginning at page 9, line 16, with the following amended paragraph:

A fuel gas is supplied through a line 112. Steam is injected into the fuel gas at an injection port 114. Steam is supplied to injection port 114 through a non-return valve 116. Correspondingly, on the oxidant side, there is a supply line 112a, for example for air, and a steam injection port 114a. A temperature sensor is provided at 100.

Please replace the paragraph beginning at page 9, line 30, with the following amended paragraph:

37 From the second heat exchanger 126, the fuel gas flows to the fuel cell stack indicated at 130. Again, standard sensors can be provided as indicated at 1312, immediately before the inlet to the fuel cell.